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ABSTRACT

This study focuses on the systematic study of verbal behavior patterns of college elementary education student teaching supervisors in dyadic conferences with student teachers and cooperating teachers. The major research problem of the study concerned the possible differences in the verbal behavior patterns of college supervisors while interacting with student teachers and cooperating teachers. The Supervisory Interaction System developed by Blumberg defines 15 categories of verbal behavior that can occur during a conference between supervisor and teacher. Ten categories reflect supervisor behavior, four indicate teacher behavior, and one indicates silence or confusion during the conference. Thirty-four taped conferences between supervisors and cooperating teachers were collected during the spring semester 1968-69 and served as the basis for this study. Each type of verbal behavior was identified and quantified as a ratio or percentage derived from the analysis of data. Data from each conference were utilized for each of the behaviors relevant to this study. Data analysis revealed that the supervisors utilized in this study did behave differently when they were interacting with student teachers from when these same supervisors interacted with cooperating teachers. This was not true for all behavior categories of the Supervisory Interaction System, but in several different behaviors that do seem to be important in the area of teacher education. Further implications and a 21-item bibliography are included. (MJM)

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A STUDY OF VERBAL BEHAVIORS ENGAGED IN BY COLLEGE STUDENT TEACHING SUPERVISORS IN CONFERENCES WITH COOPERATING TEACHERS AND STUDENT TEACHERS

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A Study of Verbal Behaviors Engaged in by College Student Teaching Supervisors in Dyadic Conferences with Cooperating Teachers and Student Teachers

A primary reason for undertaking this study was to identify the kinds of verbal behavior utilized by college student teaching supervisors during conferences with the people with whom the supervisors worked on a regular basis. A concern associated with this was whether or not any existent observation system would permit identification of specific verbal behaviors to a degree of precision sufficient for meaningful statistical analyses to be made. If an observation instrument were available to provide the necessary statistical indices of relationships between supervisory verbal behavior and teacher verbal behavior, then it would be possible to discover if and by how much supervisory verbal behavior would vary according to the status of the teacher with whom the supervisor was interacting. If significant (P=.05) differences were discovered between the ways supervisors behaved with cooperating teachers and the way they verbally behaved with student teachers, to what might these differences be attributed?

So, then, the focus of this study was on the systematic study of verbal behavior patterns of college Elementary Education student teaching supervisors in dyadic conferences with student teachers and cooperating teachers. The major research problem was this: Are the verbal behavior patterns of college supervisors different when they are interacting with student teachers from when they are interacting with cooperating teachers? The decision to study college supervisors was made because it is their function to facilitate the student teacher's progress in reducing the dichotomy between pre-service theoretical orientation and in-service practical classroom application.

The rationale for the choice of verbal behaviors as a focus for study was based on the assumption that the verbal behavior of any individual is representative of his or her total network of communicative behaviors. Also, with

the currently available observation instruments, verbal behavior can be observed with a higher degree of reliability than non-verbal behavior. Utilizing verbal behaviors as they were described and defined on a newly developed observation instrument for analyzing supervisor---teacher verbal interaction patterns during dyadic conferences appeared to be the most appropriate way to proceed with the study. This instrument will be discussed later in the presentation. A review of the literature revealed no prior studies that utilized verbal interaction patterns between supervisors and teachers as raw data. It was anticipated that this study would demonstrate the viability of analyzing verbal behaviors during dyadic conferences as accurate and objective indices of supervisory behavior and style.

A fairly extensive body of literature seems to support the notion that the student teaching experience is actually a type of organization; and as such, is subject to the same kinds of principles and techniques for change as any other organization. Kahn, et al (p. 13) viewed organizations as open systems entirely dependent upon their environments, and saw organizations defined and their parameters established by the relationships and behavior patterns carrying on cycles of input, transformation, and output. These same authors described 'office' as a relational concept defining one point in organizational space in terms of its relationships to other offices and to the organization as a whole. There are then activities or potential behaviors associated with each office within the organization, and these activities are what actually constitute the role to be played. Miles argued that members of the school organization must have clear perceptions of the organization's goals, since these affect the role specifications, expectations, and performances of the members; as well as their interpersonal communications. Katz and Kahn (p. 172) saw no difference between leadership and administration in this context, but did concede that leadership at different levels requires

different personality traits and intellectual skills; and demands different behaviors of the leader at particular points in time.

If group work is considered a primary vehicle for change in an organization, then it is appropriate to examine the impact a leader has on group activity. Preston and Heintz (pp. 314-355) found that participatory leadership produced significantly greater change than direct leadership. Faust (pp. 68-72) provided support for this with his finding that groups performed far better than individuals in problem-solving activities. Meier and Solem (pp. 277-288) found that a skillful leader can conduct a discussion in such a way as to obtain a quality of problem-solving that surpasses that of a group working with a less skilled leader. They concluded that the skillful leader did not furnish the solution, but rather summarized, encouraged analysis, interpreted, supplied information, and prevented hurt feelings. Gwynn (pp. 350-351) supported this by stating that a sure way of destroying the effectiveness of a group is to create a restrictive group - one in which members are reluctant to comment, question, compare, or express differing points of view.

This suggests that there are key positions within organizations, and these contribute to the well-being of both the organization and its members. This also suggests that the kinds of communication used within the organization are extremely important to both the members and the organization in several ways. One is that clear communication is apt to clarify roles, expectations, and goals of various members as well as the organization itself. Another is that clear communication can be utilized for the enhancement of the organization and its members. A third is that clear communication can be utilized toward particular problem-solving activities of concern to the organization. In the student teaching organization, this key communication and facilitation position appears to encompass the role of the college supervisor.

Blumberg and Amidon (pp. 1-4) view the supervisor as a change agent who,

through interaction with the teacher, brings forces into play to facilitate the teacher's self-improvement efforts, and see the supervisory conference as a major vehicle for such change. Blumberg, Weber, and Amidon hold that there are two broad aims of supervisor-teacher interaction. One is a maintenance role for the supervisor in which he seeks to assist the teacher in maintaining and enhancing productive teaching behaviors. The other is to assist teachers in changing behaviors that are not productive. Leavitt and Mueller (pp. 401-410) found that while it requires more time, even rather simple ideas are communicated most accurately when maximum feedback between communicators and communicatees is permitted. If there is opportunity for feedback, participants will accurately gain the ideas being presented and also feel more confident about them. This, in turn, may provide motivational impetus for more learning and feedback.

Related to the notion that interpersonal relationships contribute much to supervisory skill and productivity are several studies. Saunders (pp. 402-406) reported that teachers gain confidence in the supervisor when he assists in solving problems, and that respect for the teacher by the supervisor results in the teacher's awareness of the supervisor's personal interest in that teacher. Blumberg and Weber (p. 3) studied congruence of supervisory behavior and teacher morale. Their conclusion was that the behavioral style of the supervisor, as perceived by teachers, was indeed related to the teacher's morale. Their findings supported the notion that one's supervisory style is largely responsible for the nature of the work and interpersonal environment that is developed in supervision. Blumberg (p. 35) attempted to discern whether or not teachers' perceptions of supervisors' styles related to the quality of interpersonal relations teachers saw existing between themselves and their supervisors. He concluded that more positive relationships are associated with a lower emphasis on direct behavior and a higher one on indirect behavior.

Raths (p. 451) identified several teaching functions that could or would occur in classrooms as teachers work with their pupils. These are: explaining, informing or demonstrating, initiating, directing or administering, unifying the group, giving security; clarifying beliefs, attitudes, and problems; diagnosing learning problems, and evaluating. This writer would contend that these are also behaviors that would typically be demonstrated by highly competent cooperating teachers and supervisors in their work with student teachers.

The emphasis on quality supervision during the student teaching experience is noted by Segar (p. 251) in his statement that the primary danger in student teaching is that the student teacher may learn to teach badly rather than well, and therefore, more supervision is provided at this stage of his teaching career than he is likely to receive at any other time. A study by Dirks, et al, implied that both student teachers and cooperating teachers saw the value of, and were generally satisfied with, supervisor--teacher interaction aimed at improving classroom instructional performance of student teachers. Sandberg reported that teachers were happy with supervisory conferences - preferably immediately after observations. Teachers expected that conferences would be of use in getting help, in planning, and in problem-solving.

Gwynn (p. 350) wrote that discussion groups must be kept small so that there could be maximum interaction among members, and cautioned that the effectiveness of the group is dependent upon the degree of interaction within the group. This seems to suggest that dyads and triads are well within the stipulated size limit, but says nothing about the type and quality of interaction. Argyle (pp. 23-42) suggested that the type of supervision most strongly related to increased productivity was non-punitive supervision.

Sellitz, (p. 200) et al, say that,

> Observation is not only one of the most pervasive activities of daily life; it is a primary tool of scientific inquiry. Observation becomes a scientific technique to the extent that it (1) serves a formulated research purpose,

> (2) is planned systematically, (3) is recorded systematically and related to more general propositions rather than being presented as a set of interesting curiosa, and (4) is subject to checks and controls on validity and reliability.

Perhaps the best asset of observational techniques is that such techniques make it possible to record behavior as it occurs.

During the 1960's, particularly from 1964 on, there has been a wealth of material published dealing with verbal behavior observational techniques for classrooms. Earlier work in this area had been done by such educators as Anderson, Bales, and Withall; but it was not until Flanders developed his system of Interaction Analysis that there was a proliferation of published research reports that had utilized verbal behavior observation in various classroom situations as raw data for research. Numbers of modifications of the basic ten category system developed by Flanders appeared on the educational scene as viable tools for observing and interpreting verbal mainifestations of classroom social-emotional climates. These studies also related to pupil achievement, and results were remarkably consistent.

First was that verbal behavior could be systematically and reliably observed and recorded, either live or from video or audio tapes of the classroom interaction. Second, these studies indicated that pupil achievement was significantly higher when classroom teachers were primarily indirect in their teaching styles - that is, by allowing students much freedom for responses to teachers' questions, and then accepting and building upon the students' verbalizations, both cognitively and affectively. Apparently, being told what to do or think is considerably different from discovering by one's self with assistance from capable others.

There are far too many separate publications dealing with classroom observational systems for listing here, but there are two that incorporate almost all previous work done in this area. One is edited by Hough and Amidon - Interaction Analysis: Theory, Research, and Application, published

in 1968 by Addison-Wesley at Reading, Massachusetts. The other is Mirrors For Behavior, published in 1970 by Research for Better Schools, Inc. of Philadelphia. Both are most comprehensive in their coverage.

What was needed for investigating the nature of supervisory interaction was an observational system that incorporated the precision and objectivity afforded by the Flanders System of Interaction Analysis. The observation system finally decided upon for utilization in this study was developed by Dr. Arthur Blumberg of Syracuse University. He had developed this system in an attempt to better understand the dynamics of supervisory conferences, and ultimately to assist the supervisor in doing a better job.

This system defines fifteen categories of verbal behavior that can occur during a conference between a supervisor and a teacher. Ten of these categories reflect supervisor behavior, four indicate teacher behavior, and one indicates silence or confusion during the conference. Specific category descriptions are as follows.

Supervisor Behavior

1. Support-inducing Communications Behavior.--This category includes all statements on the part of the supervisor, with the exception of praise, the effect of which is to help build a "healthy" climate between him and the teacher. Behavior that releases tension is in this category, as is that which conveys an acceptance of feelings. Encouragement is categorized here.

2. Praise.--This is behavior on the part of the supervisor that connotes primarily the value judgment of "good" in connection with a teacher's ideas, plan of action, past behavior, feelings, etc.

3. Accepts or Uses Teacher's Ideas.--Included here are statements that clarify, build on, or develop ideas or suggestions by a teacher.

4. Asks for Information.-- This is behavior by the supervisor that is aimed at asking for clarification or orientation about a problem or situation under consideration. It is factually oriented and is not concerned with opinions or ways of doing things.

5. Giving Information.--This is the opposite of Category 4. It involves the supervisor giving objective information to the teacher, orienting, summarizing, etc.

6. Asks for Opinions.--This category is meant to describe supervisor behavior, the aim of which is to ask the teacher to analyze or evaluate something that has occurred, is occurring, or may occur in the classroom or in the interaction taking place.

7. Asks for Suggestions.--In this category are statements by the supervisor that ask the teacher to think about ways of doing things or ways in which things might be done differently. It has an action orientation - past, present, or future. Category 7 also refers to asking for ways in which the supervisor and teacher might work together.

8. Gives Opinions.--This category is the opposite of Category 6. It has the same substantive meaning with the exception that the supervisor is "giving", not "asking".

9. Gives Suggestions.--In a like manner as Category 8, this one has the opposite meaning as 7. The difference is in the "giving" instead of "asking". This category includes direct orders given by the supervisor.

10. Criticism.--This category includes all negative value judgments about the teacher, his behavior in the classroom, teaching methodology, competency, etc. It also includes any behavior on the part of the supervisor that can be interpreted as defensive, aggressive, or tension-producing.

Teacher Behavior

11. Asks for Information, Opinions, or Suggestion.--This is task-oriented behavior on the part of the teacher. It is the teacher counterpart of Categories 4, 6, and 7.

12. Gives Information, Opinions, or Suggestions.--This category, similar to Category 11, is the teacher counterpart to categories 5, 8, and 9.

13. Positive Social-Emotional Behavior.--This behavior is described in the same way as that in Category 1. It is not task-oriented and helps to build the supervisory relationship. Encouragement would probably not be found as constituting very much in the way of a teacher's repertoire in this category. Statements that convey agreement by choice are part of this category, but those that indicate compliance in the face of supervisory power are not.

14. Negative Social-Emotional Behavior.--Any behavior on the part of the teacher that tends to disrupt the supervisory relationship, produce tension, or convey defensiveness on his part is part of this category. Compliance in the face of supervisory power is defined as defensiveness, as is rationalization.

General

15. Silence or Confusion.--This category is used when there is silence or both the supervisor and teacher are talking at the same time so that it becomes impossible to categorize behavior specifically. An exception would be when there is silence after a behavior on the part of either supervisor or teacher that seems to have the effect of producing defensiveness (either Category 10 or 14), depending at whom the original behavior was aimed.

The Supervisory Interaction System requires that conferences between supervisors and teachers be tape recorded. That is, there is no observer present during the conferences. The observer, who may or may not be the supervisor, replays the taped conference at a later time, and records the category number of whatever verbal behavior is occurring every three seconds or whenever there is a change in verbal behavior - whichever occurs first. Obviously, this process requires an observer who is thoroughly familiar with the categories and is reliable in his recording of the behaviors.

After representative verbal behavior categories occurring during the entire conference have been recorded, these are transposed to a 15 x 15 celled matrix. To insure that the sums of rows and columns balance, each conference is presumed to begin and end with silence. Thus, the first and last recorded behavior category numbers are 15's.

Verbal behavior category numbers are transposed to the matrix in pairs. That is, the first number in each pair indicates the row, and the second category number indicates the column. One tally mark is then made in the cell located at the intersection of the row and column. The second numeral of the pair then becomes the first numeral of the next pair; and the tally marking procedure is repeated until all such pairs of numerals have been transposed to the matrix.

As these pairs of numerals are recorded, the sequential nature of the interaction is preserved in the matrix. For example, one tally in the 11, 8 cell indicates that once during the conference the teacher asked for information, opinions, or suggestions; and the supervisor responded by giving an opinion.

From the completed matrix a skilled observer is able to glean objective information that indicates the quantitative and qualitative natures of the interaction that took place during the conference. Particular row or column sums may be divided by the total number of tallies in the matrix; and the resultant number, multiplied by 100, would indicate the percentage of time in the conference that had been devoted to any particular behavior. Obviously,

percentages of supervisor talk and teacher talk would be calculated in much the same manner, as could other combinations and ratios of particular verbal behaviors.

Each supervisor utilized in this study was provided with a cassette tape recorder and a supply of tapes, and requested to tape record one dyadic conference between himself (or herself) and each of the student teachers and cooperating teachers with whom the supervisor was working during the first half of the semester. Student teachers and cooperating teachers were apprised of the nature of the study by individual supervisors who had previously been approached by the writer and had agreed to participate in the study. All student teachers and cooperating teachers approached in this manner agreed to having their conferences tape recorded. Thirty four conferences between supervisors and student teachers and twenty nine conferences between supervisors and cooperating teachers were collected in this manner during the Spring semester of the academic year 1968-69, and served as the basis for this study.

While tape collection was being conducted by the four supervisors involved, the writer was working to develop a high degree of reliability on the categorization of the verbal behaviors comprising the Supervisory Interaction System. When all taped conferences had been delivered to the writer, one taped conference was selected at random and subjected to individual analyses by Dr. Arthur Blumberg, the originator of the system, and the writer. Interobserver reliability was identified as .91 prior to any other formal analysis of the taped conferences utilized in this study.

In addition to this interobserver reliability check, four separate checks on intraobserver reliability were made while formal tape analysis was underway. After all tapes collected by one supervisor had been analyzed, one of these tapes was randomly selected and subjected to a re-analysis. This was done four times -- once with each supervisor's tapes. The resultant reliability coeffieients were .89, .82, .915, and .91.

The total number of matrices tallies for supervisors and student teachers was 10,820. The total number of matrices tallies for supervisors and cooperating teachers was 7,858. Thus, a total of 18,678 tallies of verbal behaviors occurring during dyadic conferences was available for analysis. Data resulting from the Supervisory Interaction System analysis were entered into matrices via the IBM 360 Computer at the Syracuse University Computer Center. From this preliminary computer output, data were compiled and organized for t - tests. These t - tests were calculated via the computer to determine whether or not significant differences in percentages of particular verbal behaviors had been exhibited by supervisors in their dyadic conferences with teachers of different status. These verbal behaviors categories and combinations of verbal behaviors categories under scrutiny are identified and explained in the specific directional hypotheses.

SPECIFIC DIRECTIONAL HYPOTHESIS

H_1 Supervisors will engage in a significantly higher percentage of indirect verbal behaviors with student teachers than with cooperating teachers.

H_{1a} Supervisors will engage in a significantly higher pereentage of support-inducing communications behaviors with student teachers than with cooperating teachers.

H_{1b} Supervisors will engage in a significantly higher percentage of praise with student teachers than with cooperating teachers.

H_{1c} Supervisors will engage in a significantly higher percentage of accepting teachers' ideas with student teachers than with cooperating teachers.

H_{1d} Supervisors will engage in a significantly higher percentage of asking for information with student teachers than with cooperating teachers.

H_{1e} Supervisors will engage in a significantly higher percentage of asking for opinions with student teachers than with cooperating teachers.

H_{1f} Supervisors will engage in a significantly higher percentage of asking for suggestions with student teachers than with cooperating teachers.

H_2 Supervisors will engage in a significantly higher percentage of direct verbal behaviors with cooperating teachers than with student teachers.

H_{2a} Supervisors will engage in a significantly higher percentage of giving information with cooperating teachers than with student teachers.

H_{2b} Supervisors will engage in a significantly higher percentage of giving opinions with cooperating teachers than with student teachers.

H_{2c} Supervisors will engage in a significantly higher percentage of giving suggestions with cooperating teachers than with student teachers.

H_{2d} Supervisors will engage in a significantly higher percentage of giving criticism with cooperating teachers than with student teachers.

H_3 Supervisors will exhibit a significantly higher Indirect/Direct Ration with student teachers than with cooperating teachers.

H_4 There will be a significantly higher percentage of silence or confusion between supervisors and student teachers than will be exhibited between supervisors and cooperating teachers.

STATISTICAL ANALYSIS

Each type of verbal behavior was identified and quantified as a ratio or percentage derived from the analysis of data according to the Supervisory Interaction System. Data from each taped conference were utilized for each of the behaviors relevant to this study. Level of significance was established at .05 for each hypothesis. Means, variances, standard deviations, and t values were calculated on the IBM 360 Computer at Syracuse University. Means for each hypothesis were thus subjected to t - tests that would serve as the basis for acceptance or rejection of each hypothesis.

RESULTS

Hypothesis 1 was concerned with the degree to which college supervisors engaged in indirect verbal behaviors with teachers of different status. Indirect behavior, as defined by the Supervisory Interaction System, consisted of the sums of percentages in Categories 1, 2, 3, 4, 6, and 7. The Hypothesis tested was:

H_1 Supervisors will engage in a significantly higher percentage of indirect verbal behaviors with student teachers than with cooperating teachers.

TABLE 1.--Relationship of Indirect Verbal Behavior Between Two Supervisory Groups

Hypothesis 1	N	$\bar{X}$%	S.D.	t	P
Student Teachers	34	22.16	7.350	2.0258	.05
Cooperating Teachers	29	18.34	7.298		

$t_{.05}(df = 61) = 2.000$

Table 1 reveals that a t value of 2.0258 was observed in support of the hypothesis. For 61 degrees of freedom this t value indicated significance at the .05 level. Hypothesis 1 was accepted.

Hypothesis 1a was concerned with the degree to which college supervisors engaged in support-inducing communications behavior with teachers of different status. This is Category 1 in the Supervisory Interaction System. The exact hypothesis tested was:

H_{1a} Supervisors will engage in a significantly higher percentage of support-inducing communications behavior with student teachers than with cooperating teachers.

TABLE 2.--Relationship of Support-Inducing Communications Behavior Between Two Supervisory Groups

Hypothesis 1a	N	X%	S.D.	t	P
Student Teachers	34	4.45	2.417	-0.6296	N.S.
Cooperating Teachers	29	4.88	2.877		

$t_{.05}(df = 61) = 2.000$

Table 2 indicates that a t value of 0.6296 was observed in the direction opposite to that specified in the hypothesis. This t value was not significant, and H_{1a} was not accepted.

Hypothesis 1b dealt with the degree to which college supervisors praised while they were interacting with teachers of different status. Praise is defined as Category 2 in the Supervisory Interaction System. The specific hypothesis tested was:

H_{1b} Supervisors will engage in a significantly higher percentage of praise with student teachers than with cooperating teachers.

Table 3.--Relationship of Supervisory Praise Given to Two Supervisory Groups

Hypothesis 1b	N	$\bar{X}$%	S.D.	t	P
Student Teachers	34	3.28	2.640	3.2862	.05
Cooperating Teachers	29	1.41	1.773		

$t_{.05}(df = 61) = 2.000$

Table 3 indicates an observed t value of 3.2862 in support of the hypothesis. For 61 degrees of freedom, this t value was significant to the .01 level, and H_{1b} was accepted.

Hypothesis 1c concerned itself with the degree to which supervisors accepted, utilized, and/or built upon teacher ideas presented during dyadic conferences. This is Category 3 in the Supervisory Interaction System. The particular hypothesis tested was:

H_{1c} Supervisors will engage in a significantly higher percentage of accepting teachers' ideas with student teachers than with cooperating teachers.

TABLE 4.--Relationship of Accepting Teachers' Ideas Between Two Teacher Levels

Hypothesis 1c	N	$\bar{X}$%	S.D.	t	P
Student Teachers	34	4.04	3.449	-0.8829	N.S.
Cooperating Teachers	29	4.86	3.757		

$t_{.05}(df = 61) = 2.000$

Table 4 indicates that a t value of 0.8829 was observed in the direction opposite to that specified in the hypothesis. Since the observed t value was not significant for 61 degrees of freedom, H_{1c} was rejected.

Hypothesis 1d was concerned with the degree to which supervisors would ask for factual information when they were interacting with teachers of different status. Asking for information comprises Category 4 behavior of the Supervisory Interaction System. The particular hypothesis tested was:

H_{1d} Supervisors will engage in a significantly higher percentage of asking for information with student teachers than with cooperating teachers.

TABLE 5.--Relationship of Supervisors Asking for Information Between Two Supervisory Groups.

Hypothesis 1d	N	$\bar{X}$%	S.D.	t	P
Student Teachers	34	5.68	4.320	2.3129	.05
Cooperating Teachers	29	3.39	3.396		

$t_{.05}(df = 61) = 2.000$

Table 5 indicates that a t value of 2.3129 was observed in support of this hypothesis. This t value met the requirements for significance, and H_{1d} was accepted.

Hypothesis 1e was concerned with the degree to which supervisors asked teachers of different status to analyze or evaluate either classroom behaviors or the supervisory interaction. This is Category 6 behavior in the Supervisory Interaction System. The specific hypothesis tested was:

H_{1e} Supervisors will engage in a significantly higher percentage of asking for opinions with student teachers than with cooperating teachers.

TABLE 6.--Relationship of Supervisors' Asking for Opinions Between Two Supervisory Groups.

Hypothesis 1e	N	$\bar{X}$%	S.D.	t	P
Student Teachers	34	4.61	3.314	1.6297	N.S.
Cooperating Teachers	29	3.34	2.746		

$t_{.05}(df = 61) = 2.000$

The t value calculated for testing this hypothesis was 1.6297. Since this was not significant, H_{1e} was not accepted.

Hypothesis 1f dealt with the degree to which supervisors asked teachers of different status for their suggestions as to possible courses of action for work, either in the classroom or in the conferences. This is Category 7 in the Supervisory Interaction System. The hypothesis tested was:

H_{1f} Supervisors will engage in a significantly higher percentage of asking for suggestions with student teachers than with cooperating teachers.

TABLE 7.--Relationship of Supervisors' Asking for Suggestions Between Two Supervisory Groups

Hypothesis 1f	N	$\bar{X}$%	S.D.	t	P
Student Teachers	34	0.10	0.328	-0.8311	N.S.
Cooperating Teachers	29	0.46	2.244		

$t_{.05}(df = 61) = 2.000$

Table 7 shows an observed t value of -0.8311 in support of this hypothesis. Since this was not significant for 61 degrees of freedom, H_{1f} was not accepted.

Hypothesis 2 was concerned with the degree to which supervisors engaged in verbal behaviors that tend to restrict the verbal response possibilities of teachers of different status. This direct supervisory behavior is defined by Categories 5, 8, 9, and 10 of the Supervisory Interaction System. The exact hypothesis tested was:

H_2 Supervisors will engage in a significantly higher percentage of direct verbal behaviors with cooperating teachers than with student teachers.

TABLE 8.-- Relationship of Direct Verbal Behavior Between Two Supervisory Groups

Hypothesis 2	N	$\bar{X}$%	S.D.	t	P
Student Teachers	34	29.04	11.756		
Cooperating Teachers	29	27.53	9.745	-0.5498	N.S.

$t_{.05}(df = 61) = 2.000$

Table 8 indicates that a t value of 0.5498 was observed in the direction opposite to that specified in the hypothesis. Since this t value was not significant, Hypothesis 2 could not be accepted.

Hypothesis 2a dealt with the degree to which supervisors gave factual information to teachers of different status. Giving information, orienting, and summarizing are the verbal behaviors defined by Category 5 of the Supervisory Interaction System. The particular hypothesis was:

H_{2a} Supervisors will engage in a significantly higher percentage of giving information with cooperating teachers than with student teachers.

TABLE 9.--Relationship of Supervisors' Giving Information Between Two Supervisory Groups

Hypothesis 2a	N	$\bar{X}$%	S.D.	t	P
Student Teachers	34	14.74	5.554		
Cooperating Teachers	29	19.08	7.397	2.5520	.05

$t_{.05}(df = 61) = 2.000$

The observed t value was found to be 2.5520 in support of this hypothesis. This t value was significant, and H_{2a} was accepted.

Hypothesis 2b was concerned with the degree to which supervisors analyzed or evaluated either classroom behaviors or supervisory conferences while interacting with teachers of different status. Giving such opinions comprises Category 8 behavior. The particular hypothesis tested was:

H_{2b} Supervisors will engage in a significantly higher percentage of giving opinions with cooperating teachers than with student teachers.

TABLE 10.--Relationship of Supervisors' Giving Opinions Between Two Supervisory Groups.

Hypothesis 2b	N	$\bar{X}$%	S.D.	t	P
Student Teachers	34	7.85	3.980		
Cooperating Teachers	29	7.08	4.136	-0.7350	N.S.

$t_{.05}(df = 61) = 2.000$

Table 10 shows a t value of -0.7350 in support of this hypothesis. For 61 degrees of freedom, this t value was not significant, and Hypothesis 2b was not accepted.

Hypothesis 2c was concerned with the degree to which supervisors gave teachers of different status suggestions as to possible courses of action. This behavior is defined in Category 9 of the Supervisory Interaction System. This hypothesis was:

H_{2c} Supervisors will engage in a significantly higher percentage of giving suggestions with cooperating teachers than with student teachers.

TABLE 11.--Relationship of Supervisors' Giving Suggestions Between Two Supervisory Groups

Hypothesis 2c	N	$\bar{X}$%	S.D.	t	P
Student Teachers	34	5.11	5.240		
Cooperating Teachers	29	1.09	1.605	-4.1840	N.S.

$t_{.05}(df = 61) = 2.000$

The t value calculated for testing this hypothesis was 4.1840 in the direction opposite to that specified. Since this value was not significant in the direction indicated, Hypothesis 2c was rejected.

Hypothesis 2d was concerned with the degree to which supervisors engaged in criticism while interacting with teachers of different status. Criticism is Category 10 in the Supervisory Interaction System. The specific hypothesis tested was:

H_{2d} Supervisors will engage in a significantly higher percentage of criticism with cooperating teachers than with student teachers.

TABLE 12.--Relationship of Supervisory Criticism Given to Two Supervisory Groups.

Hypothesis 2d	N	$\bar{X}$%	S.D.	t	P
Student Teachers	34	1.34	2.092		
Cooperating Teachers	29	0.28	0.707	-2.7360	N.S.

$t_{.05}(df = 61)$ - 2.000

Table 12 indicates an observed t value of -2.7360 in favor of the hypothesis. This t value was not significant in the direction specified, and H_{2d} could not be accepted.

Hypothesis 3 was concerned with the degree to which supervisory conferences would be shown to differ in indirect to direct ratios of verbal behavior with teachers of different status. Sums of the percentages of verbal behavior in Categories 1, 2, 3, 4, 6, and 7 were divided by the sums of percentages of verbal behavior Categories 5, 8, 9, and 10 for each conference. The particular hypothesis tested was:

H_3 Supervisors will have a significantly higher I/D Ratio with student teachers than with cooperating teachers.

TABLE 13.--Relationship of I/D Ratios of Two Supervisory Groups

Hypothesis 2	N	$\bar{X}$I/D	S.D.	t	P
Student Teachers	34	1.02	0.934	0.9475	N.S.
Cooperating Teachers	29	0.82	0.713		

$t_{.05}(df = 61) = 2.000$

The t value calculated for testing Hypothesis 3 was 0.9475 and was not significant. Therefore, H_3 was rejected.

Hypothesis 4 dealt with the percentage of silence or confusion that had occured during supervisory conferences with teachers of different status. Silence or confusion are the behaviors comprising Category 15 of the Supervisory Interaction System. This hypothesis was specified as:

H_4 There will be a significantly higher percentage of silence or confusion between supervisors and student teachers than there will be between supervisors and cooperating teachers.

TABLE 14.--Relationship of Silence or Confusion Between Two Supervisory Groups.

Hypothesis 4	N	$\bar{X}$%	S.D.	t	P
Student Teachers	34	3.19	2.280	0.6079	N.S.
Cooperating Teachers	29	2.87	1.826		

$t_{.05}(df = 61) = 2.000$

Table 14 indicates no significance in support of this hypothesis. On this basis H_4 was rejected.

CONCLUSIONS AND IMPLICATIONS

As it was utilized in this study, the Supervisory Interaction System demonstrated much promise for being a viable instrument for analyzing verbal interaction patterns exhibited during dyadic conferences between supervisors and teachers. Verbal behaviors may be accurately and objectively categorized within each behavior category of the system. The Supervisory Interaction System focussed on providing optimal precision in objectively recording and analyzing verbal behaviors to the extent that meaningful statistical analyses could be performed, and the results accepted with a relatively high degree of confidence in their interpretations.

Data analysis revealed that the supervisors utilized in this study did behave differently when they were interacting with student teachers from when these same supervisors interacted with cooperating teachers. This was not true for all behavior categories of the Supervisory Interaction System, but in several different behaviors that do seem to be important in the area of Teacher Education.

Indirect verbal behavior was defined, for the use of the Supervisory Interaction System, as supervisory behavior that does not restrict the teacher's possible range of responses; and included Categories 1, 2, 3, 4, 6, and 7. These categories are indicative of supervisory positive social - emotional concerns during the conferences, and also asking for information, opinions, and suggestions - none of which impose severe restrictions on possible teacher responses. Within this broad grouping of behaviors considered indirect, supervisors gave significantly more praise and asked for significantly more information when they were interacting with student teachers. A t value slightly less than that required for significance was observed in favor of supervisory requests from student teachers.

A possible explanation for these "loadings" in favor of the supervisors with student teachers in Categories 2, 4, and 6 might be that supervisors were asking for much information and many opinions; and then responding with Category 2 behavior, praise. Since it does not appear probable that supervisors would praise information - giving, one might logically conclude that supervisors were praising

the opinions offered by student teachers about the information they were also giving. The praise response from the supervisor could then be serving the dual function of providing the student teacher with positive feedback as to the perceived value of the student teacher's opinions, and also serving to provide a non-threatening atmosphere conducive to openness of interaction.

If it is assumed that most supervisory conferences are held for fairly specific purposes, then it may be that familiarization with the Supervisory Interaction System by the individual seeking to effect change in the other may facilitate interaction leading to the desired behavior change. Implications of the notions of direct and indirect behaviors would appear to be especially important here.

Obviously, much supervisory concern for indirect verbal behavior should facilitate openness of interaction between supervisor and teacher. The supervisor concentrating on positive social - emotional climate (Categories 1, 2, and 3) and asking rather than giving,is demonstrating concern for building and maintaining interpersonal relationships while working on an open problem-solving level. By asking rather than telling, the supervisor does not restrict teacher responses. That is, the teacher is free to express his or her own ideas and feelings associated with the matter under discussion. This would allow the teacher the opportunity to arrive at her own solutions and possible courses of action for the problem at hand; and then discuss openly which appear more viable than others. This indirect behavior, then, appears to be quite amenable to facilitation of a problem-solving approach to supervision.

The supervisor concentrating on direct verbal behavior - telling rather than asking, and criticizing - tends to disregard positive social - emotional concern in his eagerness to provide much to which the teacher can only acquiesce. The teacher may change behavior as a result of direct supervisory behavior, but will probably never be willing to interact openly with the supervisor in seeking her own solutions to problems. It may even come to the point where the teacher probably wonders whether or not the supervisor is at all interested in assisting the teacher in finding her own solutions, or is merely interested in having the

teacher in finding her own solutions, or is merely interested in having the teacher do a specific something and doesn't care if the teacher has any worthwhile inputs to make.

Skill in the use of the Supervisory Interaction System may also serve to provide objective feedback to the supervisor as to exactly what kinds of interaction had transpired during a specific supervisory conference. The knowledge gleaned from familiarization and utilization of the system could then serve to improve congruence between intended and actual supervisory interaction behavior. This, in turn, could lead to the development of an interaction style that is both effective and comfortable for a particular supervisor.

Applications of the use of the Supervisory Interaction System would seem to transcend the realm of education and apply to almost all areas in which supervisors work. For example, it may be a viable idea to work this kind of supervisor training into the world of business. There are supervisors in almost all large business offices and training operations. Typically, these people have responsibility for training people new to the business and maintaining staff efficiency - supervisory functions. Their dealings with others are primarily of a verbal nature and must correlate the skills, goals, needs, and interests of people ranging from newly-hired to those having many years of experience.

Changes affecting the total organization would naturally tend to affect the individuals within that organization. These changes may mean changing the behavior of individual persons, while maintaining certain other behaviors. Morale might well be a factor here.

Changes can come about via administrative edict, but would probably require further clarification through discussion between the office supervisor and those affected by the edict. This means verbal communication of an interpersonal nature. It would appear likely that a supervisor wishing to communicate exactly how an edict would affect any particular person would arrange a conference with that person and engage in interaction about the edict. If the supervisor has an interest

in effecting change while also wishing to maintain openness in interaction with other employees, it would seem appropriate to engage in primarily indirect verbal behavior. Knowledge of the Supervisory Interaction System may facilitate these goals.

SELECTED BIBLIOGRAPHY

Argyle, M., et al. "Supervisory Methods Related to Productivity, Absenteeism, and Labor Turnover." Human Relations, XI, 1958, pp. 23-42.

Blumberg, Arthur. "Supervisory Behavior and Interpersonal Relations." Educational Administration Quarterly, (Spring, 1968), pp. 34-45.

Blumberg, Arthur. "A System for Analyzing Supervisor -- Teacher Interaction." Mirrors For Behavior, Ed. by A. Simon and G. Bower. Philadelphia: Research for Better Schools, Inc., 1970.

Blumberg, Arthur and Amidon, Edmund J. "Teacher Perceptions of Supervisor--Teacher Interaction." Administrator's Notebook, XIV (September, 1965), pp. 1-4.

Blumberg, Arthur and Weber, Wilford. "Teacher Morale as a Function of Perceived Supervisor Behavior Style." Journal of Educational Research, LXII, (November, 1968).

Blumberg, Arthur; Weber, Wilford; and Amidon, Edmund J. "Supervisor -- Teacher Interaction as Seen by Supervisors and Teachers." To be published.

Dirks, Marie, et al. "The Special Contribution of the Home Economics Education Supervisor to the Student Teaching Situation." Studies in Higher Education, Number 94, Lafayette, Indiana: Purdue University Press, 1967.

Faust, W. L. "Group Versus Individual Problem-Solving." Journal of Abnormal Social Psychology, LIX, 1959, pp. 68-72.

Gwynn, J. Minor. Theory and Practice of Supervision. New York: Dodd, Mead and Company, 1961.

Hough, John B. and Amidon, Edmund J., Eds. Interaction Analysis: Theory, Research, and Application. Reading, Massachusetts: Addison-Wesley Publishing Company, 1968.

Kahn, Robert L., et al. Organizational Stress: Studies in Role Conflict and Ambiguity. New York: John Wiley and Sons, 1964.

Katz, Daniel and Kahn, Robert. The Social Psychology or Organizations. New York: John Wiley and Sons, 1966.

Leavitt, H. J. and Mueller, R. A. H. "Some Effects of Feedback on Communications." Human Relations. V, 1951, pp. 401-410.

Meier, Norman R. F. and Solem, Allen R. "The Contribution of a Discussion Leader to the Quality of Group Thinking: The Effective Use of Minority Opinions." Human Relations, V, 1952, pp. 277-288.

Miles, Mathew B. "Planned Change and Organizational Health: Figure and Ground." Change Processes in the Public Schools. University of Oregon Press, 1965.

Preston, Malcom G. and Heintz, Roy K. "Effects of Participatory vs. Supervisory Leadership on Group Judgment." Journal of Abnormal Social Psychology, XLIV, 1949, pp. 344-355.

Raths, Lous. "What is a Good Teacher?" Childhood Education, (May, 1964), pp. 444-453.

Sandberg, Herbert H. "Beginning Teachers' and Supervisors' Appraisals of Selected Supervisory Techniques." Unpublished doctoral dissertation, Pennsylvania State University, 1965.

Saunders, Jack C. L. "Teachers Evaluate Supervisors Too." Educational Administration and Supervision, XLI (November, 1955), pp. 402-406.

Segar, G. Bradley, Jr. "Team Supervision." Partnership in Teacher Education. Ed. by E. Brooks Smith. Washington, D.C.: AACTE, 1967, pp. 251-253.

Sellitz, Claire, et al. Research Methods in Social Relations. New York: Holt, Rinehart, and Winston, Inc., 1966.

Simon, A. and Bower, G., Eds. Mirrors For Behavior. Philadelphia: Research for Better Schools, Inc., 1970.